REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated August 19, 2005. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

As outlined above, claim 34 is being amended to correct formal errors and/or to more particularly point out and distinctly claim the subject invention. Support for the amendments to the claims may be found throughout the specification and the drawings. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Prior Art Rejections

The Examiner rejected claims 2-15 and 17-34 under 35 U.S.C. § 102(b) as being anticipated by George et al. (US Patent No. 5,774,669). Further, the Examiner rejected claim 34 under 35 U.S.C. § 103(a) as being unpatentable over George '669 in view of Dev et al. (US Patent No. 6,049,828) Applicants strongly but respectfully traverse these rejections.

The present invention as recited in claim 1 is directed to a method of automatically recognizing a network configuration, for automatically recognizing a device configuration on a network system having a network node including at least one or more intelligent network devices each implementing an SNMP agent and a management information base. The method comprises the steps of sending an ICMP echo request from an administrator terminal implementing an SNMP manager to individual network devices in the network node, and detecting existence and non-existence of network devices on the basis of responses therefrom; sending to the SNMP agents in the individual network devices detected a transfer request for information stored in the management information bases of the respective network devices, detecting the types of the network devices in the network node based on the information stored in the management information bases returned, wherein the type of network devices detected includes at least an active or inactive state of a network device, acquiring a set of physical addresses of network devices connected to ports of a network device from the management information base of the network device, the network device

being a type of device to have a bridge function, acquiring information as to physical-IP address correspondence from the management information base of a network device having a routing function, and recognizing at an IP level the network devices connected to each of the ports of the network device having a bridge function, based on the acquired information as to physical-IP address correspondence.

Further, the present invention as recited in claim 17 is directed to a system for automatically recognizing a network configuration, wherein an administrator terminal implementing an SNMP manager automatically recognizes a device configuration on a network system having a network node including at least one or more intelligent network devices each implementing an SNMP agent and a management information base. The administrator terminal implementing an SNMP manager comprises first means for sending an ICMP echo request to individual network devices in the network node, and detecting existence or non-existence of network devices on the basis of responses therefrom; a second means for sending to the SNMP agents in the individual network devices detected a transfer request for information stored in the management information bases of the respective network devices, and detecting the types of the network devices in the network node based on the information stored in the management information bases returned, wherein the type of network devices includes at least an active or inactive state of a network device, a third means for acquiring a set of physical addresses of network devices connected to ports of a network device from the management information base of the network device, the network device being a type of device to have a bridge function, a fourth means for acquiring information as to physical-IP address correspondence from the management information base of a network device having a routing function, and a fifth means for recognizing at an IP level the devices connected to each of the ports of the network device having a bridge function, based on the acquired information as to physical-IP address correspondence.

Even more, the present invention as recited in claim 34 is directed to a network configuration chart displaying system for displaying onto a display screen a network configuration chart showing connections of network devices connected to a network via packet relay equipment. The system comprises connection information collecting means for collecting connection information of network devices such as a computer and a printer connected to the network, and storing the same into a connection table, wherein the connection information collecting means includes means for acquiring a set of physical addresses of network devices connected to ports of a network device from the management

information base of the network device, the network device being a type of device to have a bridge function, means for acquiring information as to physical-IP address correspondence from the management information base of a network device having a routing function, and means for recognizing at an IP level the devices connected to each of the ports of the network device having a bridge function, based on the acquired information as to physical-IP address correspondence; and connection display means for displaying packet relay equipment having a plurality of connection ports as a packet relay equipment object having as many connection objects as the number of connection ports, displaying a network device such as a computer and a printer as a device object having a connection object, and displaying the connection between the packet relay equipment and the network device as a line segment connecting the connection objects to each other, on the basis of the connection information collected. The collected connection information includes at least port information of the network device, existence or non-existence of a selected network device and an active or inactive state of the selected network device.

In contrast to the present invention, George '669 at best merely discloses a system that uses SNMP to distinguish types of network devices and HNMS (NAS Hierarchical Network Management System) to obtain more detailed information of the network devices (See col. 18, lines 25-54). Rather, this reference only shows recognizing the relationship between network devices based on HNMS object IDs. Applicants will contend that such a method may allow recognizing the relationship between the network devices based on the ethernet addresses, IP addresses and netmasks assigned to each network device, as shown in Figures 7A and 7B, but cannot recognize network devices connected to each port of a bridge device. In particular, Applicants will point out that a layer2 network device, such as a bridge, only forwards packets based on physical addresses, and does not have a physical-IP address table. Thus, even if a bridge is made an SNMP agent, it cannot report IP level information of the network devices connected to each of its ports.

Consequently, George '669 cannot and does not disclose, teach or suggest an SNMP network management system that incorporates, among other features, a step or means for acquiring information as to physical-IP address correspondence from the management information base of a network device having a routing function, nor a step or a means for recognizing at an IP level the network devices connected to each of the ports of the network device having a bridge function, based on the acquired information as to physical-IP address

correspondence. Consequently, George '669 by itself falls far short of either anticipating or rendering obvious each and every feature of the present invention as claimed.

In addition, Applicants will contend that the secondary reference of Dev '828 fails to provide any disclosure, teaching or suggestion that would make for the deficiencies in George '669, such that their combination could render every feature of the present invention obvious to one of skill in the art. Rather, the present invention as a whole is distinguishable and thereby allowable over the prior art.

Conclusion

In view of all the above, Applicants respectfully submit that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more than sufficient that the present invention as now claimed would not have been anticipated nor rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and phone number indicated below.

Respectfully submitted,

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